

REMARKS

Applicants have carefully reviewed this Application in light of the Office Action mailed December 19, 2005. Claims 1-6, 8, 15 and 25 were previously cancelled without prejudice or disclaimer. Claims 7, 9-14, 16-24 and 26-30 are pending in this Application. Claims 7, 9-14, 16-24, and 26-30 stand rejected under 35 U.S.C. §112, first paragraph and 35 U.S.C. §103. Applicants respectfully request reconsideration and favorable action in this case.

Objections under 35 U.S.C. § 132(a)

The Examiner continues to object to the amendment filed February 9, 2005, under 35 U.S.C. § 132(a) because the Examiner alleges that the amendments introduced new matter into the disclosure. Specifically, the Examiner states that added material not supported by the original disclosure includes the phrases "light is transmitted ... through the opening through the thin film and onto the wafer," as recited in Claims 1, 17 and 26, "wherein a portion of the transmitted (or projected) light is diffracted by the photomask opening and passes through the thin film at the angle of incidence greater than zero, the transmission of such portion of light passing through the thin film at the angle of incidence greater than zero being maximized due to the optical thickness of the thin film produces an increased resolution of the projected image on the wafer," recited in Claims 7 and 26, and "light transmitted ... through the opening in the photomask, through the thin film and onto the wafer ... a portion of the transmitted light is diffracted by the photomask opening and passes through the thin film as off-axis light the approximate 99% transmission of such off-axis light produces an increased resolution of the image of the opening projected onto the wafer," recited in Claim 17. To support the objection, the Examiner provides the following remarks:

The specification fails to teach that the transmitted light passes through the photomask, then through the thin film and then to the wafer, and fails to teach the light diffracted by the photomask or the projected image generated from the photomask will pass the thin film again and a diffracted portion of the light passes through at an incident angle greater than zero is maximized due to the optical thickness of the thin film. The specification also fails to positive support for the diffracted light from the photomask passes through the thin film as off-axis light and 99% of the off-axis light increase the resolution of the image. The specification

explicitly teaches that the pellicle film is on the photomask wherein the light will incident on the pellicle first before it been diffracted by the photomask as demonstrated by Figure 3 of the instant application.

(Office Action, Pages 2-3).

Applicants again reiterate that while Figure 3 of the Application depicts that pellicle 50 is mounted on photomask 54, neither Figure 3 or any other portion of the specification “explicitly teaches” that light must be incident upon the pellicle before being diffracted by photomask 54, as alleged by the Examiner. Figure 3 does not indicate the placement of a light source with respect to photomask 54 or pellicle 50. Thus, Figure 3 does not even implicitly, let alone “explicitly,” teach that light must be incident first upon pellicle 50 before being diffracted by photomask 54, and the Examiner has yet to present any logical explanation or support for her continued assertions that light cannot be incident upon a photomask prior to being diffracted by a pellicle, as disclosed by the specifications and recited by the claims.

In further support of the objection, the Examiner remarks:

The applicant is respectfully noted, although the specification loosely discloses that the pellicle may be placed between the photomask and an imaging lens, (specification page 10 lines 15-17), this phrase does not give the support for “wherein a portion of the transmitted (or projected) light is diffracted by the photomask opening and passes through the thin film at the angle of incidence greater than zero, the transmission of such portion of light passing through the thin film at the angle of incidence greater than zero being maximize due to the optical thickness of the thin film produces an increased resolution of the projected image on the wafer” and/or “light transmitted ... through opening in the photomask through the thin film onto the wafer ... a portion of the transmitted light is diffracted by the photomask opening and passes through the thin film as off-axis light the approximate 99% transmission of such off-axis light produces an increased resolution of the image of the opening projected onto the wafer” as claimed in the claims.

... [T]he specification fails to give an explicitly relationship between the pellicle, the photomask, the imaging lens and the wafer. ...

Furthermore, the applicant is also respectfully noted that in the same paragraph of the specification (page 10) there is an explicitly teaching of having the pellicle “covers” the photomask for protecting it from dust. If one reads the paragraph in page 10 of the specification with the explicitly disclosure of the pellicle being formed on the photomask as shown in

Figure 3, one would not be able to deduce that the diffracted light from the photomask is capable of being transmitted through the pellicle and the non-zero incident of the diffracted light on the pellicle will be maximized and the light diffracted from the photomask will be off-axis light passes through the pellicle with 99% of the off-axis light increases the resolution of image”.

(Office Action, Pages 3-4).

Applicants again reiterate that the specification contains more than ample support for the claims, adequately describes the relationship between the pellicle, the photomask, the imaging lens, and the wafer, and more than “loosely” discloses that the pellicle may be placed between the photomask and an imaging lens.

Furthermore, the specification contains numerous statements regarding the spatial relationship among the pellicle, the photomask, the imaging lens and the wafer. For example, Figures 2A and 2B depict incident light 12 (32) striking mask 14 (34), where incident light 12 (32) is diffracted and a portion is captured by lens 20 (40). Light captured by lens 20 (40) is then projected onto a wafer. (Specification, Page 3, line 24 - Page 4, line 9, and Page 4, line 21 - Page 5, line 12). In accordance with the present invention, a pellicle including a frame and a thin film is coupled to a photomask. (Specification, Page 6, lines 22-27). The photomask assembly including the pellicle and the photomask can be spatially oriented such that the pellicle is placed between the light source and the photomask, or between the photomask and the imaging lens, or both. (Specification, Page 10, lines 15-17; Page 13, lines 11-17). Hence, these portions of the specification read together with the claims renders it clear to the reader that light is capable of being incident upon the photomask prior to being diffracted onto the pellicle. Thus, the contents of the specification more than adequately support the language set forth in the claims.

In yet further support of the objection, the Examiner remarks:

[T]he specification fails to teach that the thickness of the pellicle is designed to maximized the diffracted light from the photomask toward the wafer. A simple language of placing the pellicle between the photomask and the imaging lens (without explicitly states the location of the imaging lens to the least) WILL NOT be enough to support the “maximization of diffracted light portion from the photomask trough the pellicle to the wafer” or “99% of the transmission of the off-axis light produces an increased resolution of image”.

(Office Action, Pages 3-4).

To the contrary, the specification provides more than ample support for these elements of the claimed invention. For example, the specification contains the following passages which more than adequately support the claims:

- “In accordance with another embodiment of the present invention, a pellicle includes a thin film having an optical thickness greater than a design thickness that produces a transmission maxima for normal incidence light at a desired exposure wavelength. The optical thickness preferably is optimized for transmission of off-axis incident light at a desired angle.” (Page 6, lines 15-21).
- “The pellicle includes a frame coupled to the photomask and a thin film that transmits approximately ninety-nine percent of off-axis light at an exposure wavelength.” (Page 6, lines 24-27).
- “The optical thickness is optimized for transmission of off-axis incident light through the thin film.” (Page 7, lines 1-3)
- “Another important technical advantage of certain embodiments of the present invention includes a pellicle coated with an anti-reflective material that creates a higher differential between on-axis and off-axis light. By increasing the amount of off-axis light transmitted through the pellicle, the intensity of the high order components containing spatial information for an image may also be increased relative to the low order components containing no spatial information. The increased intensity of the high order components allows for better control of the line edges of fine device features and therefore, increases the resolution of an associated photolithography system.” (Page 7, lines 23-35).
- “The optical characteristics of the pellicle can significantly affect the performance of the photolithography system, including the amount of off-axis light transmitted through the photomask. In a particular embodiment, the pellicle of the present invention increases the transmission of off-axis light through an associated photomask by having an optical thickness that is greater than a design thickness for an exposure wavelength.” (Page 10, lines 17-25).
- “As shown by the graph, if film 51 has a design thickness of 845 nm, transmission of incident light drops from approximately ninety-nine percent (99%) at a zero degree angle of diffraction from patterned layer 53 of photomask 54 to approximately ninety-four percent (94%) at a twenty degree angle of diffraction. Since transmission at a given wavelength is directly related to the thickness of film 51, a thicker film may increase the amount of off-axis light captured at the given wavelength.” (Page 13, lines 2-10).
- “In one embodiment, off-axis transmission of light may be increased by designing the optical thickness of film 51 to be less than or equal to one-quarter of the exposure wavelength greater than a design thickness that produces a transmission maxima at the exposure wavelength.” (Page 13, line 31 - Page 14, line 1).

- “The increased optical thickness produces a transmission maxima at a wavelength slightly higher, e.g., approximately one to twenty nanometers, than the exposure wavelength for the photolithography system. Therefore, by increasing the optical thickness, film 51 will be optimized for transmission of light at a desired angle that is greater than normal incidence.” (Page 14, lines 8-15).
- “As the physical thickness increases, a higher differential between normal incidence, on-axis transmission and higher angle, off-axis transmission occurs, which optimizes the transmission of light for multiple angles of incidence. By controlling the physical thickness of the pellicle film, the placement of the transmission peaks with respect to wavelength and angle of incidence may be achieved. Furthermore, if a transmission maxima for larger angles of incidence occurs at the exposure wavelength of the photolithography system, the system may capture the spatial information contained in the higher order peaks and create a high resolution image of the openings on the photomask.” (Page 14, line 34 - Page 15, line 11).

In still further support of the objection, the Examiner remarks, “[t]he imaging lens is not even in the claims and is not disclosed in the specification either.” (Office Action, Page 4). To the contrary an imaging lens is disclosed numerous times in the specification. For example, the specification states:

- “In a photolithography system, an *imaging lens* should capture the zero order peak and at least one higher order peak to create an accurate image on a wafer since the zero order peak contains the intensity of the image and the higher order peaks contain the image’s spatial information.” (Page 2, lines 24-29) (emphasis added).
- “The relationship between the resolution of a photolithography system, e.g., the minimum feature size of an image, and the numerical aperture of the *imaging lens* is described by Rayleigh’s formula, ...” (Page 2, line 34 - Page 3, line 2) (emphasis added).
- “*Lens 20* may capture zero order peak 16 and project the image features present in zero order peak 16 onto a wafer (not expressly shown). *Lens 20* may also project spatial information contained in first order peaks 17 and 18 onto the wafer if the numerical aperture of *lens 20* is sufficiently large enough to capture light having angles of diffraction larger than zero degrees.” (Page 4, lines 3-9) (emphasis added).
- “... *lens 40* may capture zero order peak 36 and first order peak 37, and project the image features present in zero order peak 36 and first order peak 37 onto a wafer (not expressly shown).” (Page 4, line 35 - Page 5, line 3) (emphasis added).
- “The pellicle may be placed between the light source and the photomask, or between the photomask and the *imaging lens*, or both.” (Page 10, lines 15-17) (emphasis added).

- “In one embodiment, pellicle 50 may be located between photomask 54 and an *imaging lens* (not expressly shown) of a photolithography system. A radiant energy source (not expressly shown) emits a wavelength of light toward photomask 54 and the incident light passes through the transparent openings formed by patterned layer 53 of photomask 54. The incident light on photomask 54 diffracts beams that create a Fraunhofer diffraction pattern. Each peak of the Fraunhofer pattern corresponds to the openings’ Fourier expansion series terms. If light having large diffraction angles is collected by the *imaging lens*, the projected image will consist of an increased amount of Fourier expansion series terms.” (Page 13, lines 11-23) (emphasis added).

Furthermore, Applicants are unaware of any requirement of applicable law, regulations, rules, or provision of the M.P.E.P. that would require Applicants to claim an imaging lens in order for the claims to be allowable. While the specification contemplates that light emerging from a photomask assembly is captured by an imaging lens and then projected onto a wafer, Applicants need not claim every detail which enables the present invention. For example, while Applicants set forth in the specification the types of materials that may be used for various components of the present invention, they need not claim such materials. Similarly, while an imaging lens is useful to project light emerging from a pellicle film onto a wafer, such imaging lens need not be claimed any more than Applicants need to claim the type of medium (for example, air or a vacuum) through which transmitted light travels before reaching the wafer.

In additional support of the objection, the Examiner remarks:

Furthermore, since the pellicle has only specific transmission peaks at specific wavelength and specific angles of incidence, to simply placing the pellicle between the photomask and the imaging lens will not be able to meet the sophisticated condition to produce the maximum off-axis transmission for the diffracted light as claimed in the claims.

(Office Action, Page 4).

Applicants do not understand the argument being made by the Examiner and respectfully request that the Examiner clarify this argument. Applicants assert that the results set forth in the specification were not obtained by “simply placing the pellicle between the photomask and the imaging lens” but rather were a result of practicing the claimed systems and methods. Applicants are further confounded that the methods and systems claimed by the Applicants, read in light of the specification, would be insufficient to “meet the sophisticated condition to produce the maximum of off-axis transmission for the diffracted

light as claimed in the claims” given that the specifications details that the Applicants observed such results by practicing the claimed methods and systems.

For the reasons set forth above, Applicants respectfully submit that all of the amendments made in the response filed on February 9, 2005 do not add new matter and are fully supported by Applicants’ specification. Applicants respectfully request that the Examiner reconsider and withdraw the objections to the claims.

Rejections under 35 U.S.C. § 112

Claims 7, 9-14, 16-24, and 26-30 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention.

Specifically, the Examiner bases this rejection on allegedly newly added matter in the amendments filed on February 9, 2005. As described above, no new matter has been added and the amendments are fully supported by Applicants’ specification. Applicants respectfully request that the Examiner reconsider and withdraw the rejections to Claims 7, 9-14, 16-24 and 26-30.

Claims 7, 9-14, 16-24, and 26-30 additionally stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, the Examiner states that the phrase “the transmission of such portion of light . . . produce an increased resolution of the projected image on the wafer,” as recited in Claim 7 and the phrase “projection of the diffracted portion of light . . . increase the resolution of the image,” as recited in Claim 26 are not enabled by the disclosure because “[t]he resolution of a projected image therefore is implicitly defined at least in part by the size of spatial information of the photomask, but not by the projection of certain portion of the light.” (Office Action, Page 5). In an Office Action dated December 10, 2004, the Examiner stated that the phrase “the resolution of the image . . . being defined at least in part by the projected spatial information,” as recited in independent Claims 7, 17 and 26, was “confusing and indefinite since it is not clear what is this spatial information and how can the resolution be defined by the spatial information.”

(Office Action, Page 5). These statements are completely inconsistent and the Examiner now uses language deleted from Applicants' claims to reject independent Claims 7 and 26.

Nonetheless, assuming that Examiner's assertion that the resolution of an image is defined at least by the size or spatial information of the opening of a photomask, such assertion only serves to confirm that Claims 7 and 26 are enabled by the specification. As taught by the specification, "[w]hen incident light encounters [a photomask] slit, an illumination intensity profile, known as a Fraunhofer diffraction pattern, results that is a function of the slit width and the wavelength of the light." (Specification, Page 2, lines 16-19). Further "[i]n a photo lithography system, an imaging lens should capture the zero order peak and at least one higher order peak [of the Fraunhofer diffraction pattern] to create an accurate image on a wafer since the zero order peak contains the intensity of the image and the *higher order peaks contain the image's spatial information.*" (Specification, Page 2, lines 24-29) (emphasis added). Hence, the spatial information of the photomask is translated into light which includes image intensity *and* image spatial information. The specification further states that when the higher order components of the Fraunhofer diffraction pattern that contain spatial information are transmitted through the thin film and onto a wafer, a high resolution image may be projected onto the wafer. (Specification, Pages 14-15). Hence, while resolution of an image may be determined at least in part by photomask dimensions as noted by the Examiner, resolution may also be determined by portions of the light projected through a photomask. Applicants, therefore, submit that independent Claims 7 and 26 meet the requirements of section 112, first paragraph.

The Examiner also rejected Claims 7, 17 and 26 under 35 U.S.C. § 112, first paragraph stating that the structure shown in Figure 3, "the light passes through the thin film first then to the photomask. The light diffracted by the photomask will not pass through the film again..." Yet again, the Examiner assumes without any basis, explanation or rationale that in the structure shown in Figure 3, light must invariably be incident upon pellicle 50 before passing to photomask 54, despite the fact that Examiner has not yet provided any logical, sustainable grounds for such assumption, the fact that such assumption is refuted by the plain language of the specification, as detailed above, and the fact that such assumption has been refuted numerous times during the prosecution of this application without any reasoned opposition by the Examiner. Again, the pellicle may be located between the

photomask and the imaging lens used to project any image on the wafer. (Specification, Page 10, lines 15-17, Page 13, lines 11-23). Therefore, diffracted light can pass through the thin film, and claims 7, 17 and 26 meet the requirements of section 112, first paragraph.

Finally, the Examiner rejected Claim 17 under 35 U.S.C. § 112, first paragraph because “[t]he specification only enables the off-axis light at certain degrees of incidence to have transmission approximates 99% of the light but not to all of the off-axis lights or not to any off-axis light at any incident angle.” (Office Action, Page 4). Claim 17 recites the limitation of an “amorphous fluoropolymer thin film operable to transmit approximately ninety-nine percent (99%) of off-axis light at a particular wavelength.” Applicants reiterate the argument from the Response dated October 17, 2005 that the claim does not recite transmission of all off-axis light at any incident angle, rather the claim recites transmission of a significant percentage of off-axis light at a certain wavelength. Additionally, the claim is supported by the specification. (See Specification, Pages 14-15 and Figure 5). In the Office Action, the Examiner does not refute Applicant’s argument, but merely restates Examiner’s earlier argument. Applicants, therefore, submit that independent Claim 17 meet the requirements of section 112, first paragraph.

Because independent Claims 7, 17 and 26 meet the requirements of section 112, first paragraph, Applicants respectfully request that the Examiner reconsider and withdraw the rejections to Claims 7, 9-14, 16-24 and 26-30.

Claim Objections

Claims 9, 12, 19, 21 and 29 were objected to by the Examiner because of informalities. Specifically, the Examiner states:

it is not understandable how the thin film having thickness that gives peak transmission for **off-axis** or **non-normal incident light** but is able to give peak transmission that is *1 nanometer* above the “particular wave length.” It is impossible to have this kind of accuracy for light having wave length differing in one nanometer to give so different transmission property.

(Office Action, Page 6) (emphasis in original).

Applicants are unaware of any provision under applicable law, regulations or the M.P.E.P. that provides the Examiner with authority or discretion to object to Claims 9, 12, 19, 21 and 29 for the reasons stated in the Office Action. Particularly, Applicants are

unaware of any basis for rejecting or objecting to a claim based solely on an Examiner's mere disbelief that a claim made by the Applicant is physically impossible. Such an objection is further bewildering given that Applicants explain in the specification that such accuracy is indeed possible: "increased optical thickness produces a transmission maxima at a wave length slightly higher, e.g., approximately one to twenty nanometers, than the exposure wave length for the photo lithography system." (Specification, Page 14, lines 8-12)

For at least these reasons, Applicants respectfully request reconsideration and withdrawal of the objections.

Rejections under 35 U.S.C. § 103

Claims 7-14, 16-24, and 26-30 stand rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,742,386 issued to Noriyuki Nose et al. ("Nose") in view of U.S. Patent No. 4,657,805 issued to Yasunori Fukumitsu et al. ("Fukumitsu") and U.S. Patent No. 4,966,457 issued to Fuminori Hayano et al ("Hayano").

Nose discloses an apparatus for detecting foreign matter on a substrate. The substrate may be a pellicle formed of nitrocellulose. (Col. 1, Lines 44-47). The apparatus monitors the transmittance or the reflectivity of the pellicle and corrects the amount of light projected onto a surface based on the monitored value. (Col. 2, Lines 47-53). In particular, as shown in Figure 1, Nose discloses a system for detecting foreign matter a substrate by measuring scattered light caused by such foreign matter along with light that is reflected off of a pellicle located over the substrate. (Fig. 1; Col. 4, Line 22 to Col. 5, Line 49). Corrective measures are performed by varying the intensity of the light beam. (Col. 5, Lines 38-39).

Fukumitsu discloses a dust cover comprising a film having a layer of a specific fluoropolymer.

Hayano discloses an apparatus for determining the presence and location of a tiny foreign particle, such as dust, on the surface of a photomask or pellicle substrate. (Col. 1, lines 9-17).

Claim 7 recites a pellicle comprising a "thin film formed to cooperate with a photomask including an opening such that when light is transmitted at the particular wavelength through the opening in the photomask, through the thin film and onto the wafer to project an image of the photomask opening onto the wafer, wherein a portion of the

transmitted light is diffracted by the photomask opening and passes through the thin film at the angle of incidence greater than zero, the transmission of such portion of light passing through the thin film at the angle of incidence greater than zero being maximized due to the optical thickness of the thin film produces an increased resolution of the projected image on the wafer.”

Claim 17 recites a photolithography system comprising “an amorphous fluoropolymer thin film operable to transmit approximately ninety-nine percent (99%) of off-axis light at a particular wavelength such that during the photolithographic process in which light is transmitted at the particular wavelength through the opening in the photomask, through the thin film and onto the wafer to project an image of the photomask opening onto the wafer, wherein a portion of the transmitted light is diffracted by the photomask opening and passes through the thin film as off-axis light, the approximate 99% transmission of such off-axis light produces an increased resolution of the image of the opening projected onto the wafer.”

Claim 26 recites a method for performing photolithography comprising the step of “projecting the radiant energy through the opening in the photomask, through the thin film and onto a wafer to form an image of the photomask opening on the wafer, wherein a portion of the projected light is diffracted by the photomask opening and passes through the thin film at the angle of incidence greater than zero for which the transmission of light through the film is substantially maximized, such that the thin film substantially maximizes projection of the diffracted portion of light onto the wafer due to the optical thickness of the thin film in order to increase the resolution of the image of the photomask opening projected on the wafer.”

Applicants respectfully submit that the cited references fail to disclose every element of Applicants’ invention as amended. Further, there is no motivation, teaching, or suggestion to combine Nose, Hayano and Fukumitsu. Nose, Hayano and Fukumitsu, alone or in combination, fail to teach at least a “thin film formed to cooperate with a photomask including an opening such that when light is transmitted at the particular wavelength through the opening in the photomask, through the thin film and onto the wafer to project an image of the photomask opening onto the wafer, wherein a portion of the transmitted light is diffracted by the photomask opening and passes through the thin film at the angle of incidence greater than zero, the transmission of such portion of light passing through the thin film at the angle of incidence greater than zero being maximized due to the optical thickness of the thin film

produces an increased resolution of the projected image on the wafer,” as recited by amended Claim 7. Additionally, Nose, Hayano or Fukumitsu fail to teach a photolithography system including “an amorphous fluoropolymer thin film operable to transmit approximately ninety-nine percent (99%) of off-axis light at a particular wavelength such that during the photolithographic process in which light is transmitted at the particular wavelength through the opening in the photomask, through the thin film and onto the wafer to project an image of the photomask opening onto the wafer, wherein a portion of the transmitted light is diffracted by the photomask opening and passes through the thin film as off-axis light, the approximate 99% transmission of such off-axis light produces an increased resolution of the image of the opening projected onto the wafer,” as recited by amended Claim 17. Further, Nose, Hayano or Fukumitsu fail to teach or suggest “projecting the radiant energy through the opening in the photomask, through the thin film and onto a wafer to form an image of the photomask opening on the wafer, wherein a portion of the projected light is diffracted by the photomask opening and passes through the thin film at the angle of incidence greater than zero for which the transmission of light through the film is substantially maximized, such that the thin film substantially maximizes projection of the diffracted portion of light onto the wafer due to the optical thickness of the thin film in order to increase the resolution of the image of the photomask opening projected on the wafer,” as recited by amended Claim 26.

The Examiner states that “[i]t is . . . implicitly true or obvious modification to one skilled in the art to use light incident at these off-axis incident angles on the thin film pellicle and the light is transmitted by the thin film to the photomask and to expose and transfer the IC pattern on the photomask to the wafer for the benefit of maximizing the intensity of the exposure light to efficiently form the pattern on the wafer.” (Office Action, Page 8). The Examiner’s rejection, however, fails for at least the following reasons. First, the Examiner’s statement with respect to the thin film transmitted off-axis light to the photomask is incorrect. As stated above and specifically recited in Claims 7, 17 and 26, the light is diffracted by an opening in the photomask and the diffracted light passes through the thin film because the thin film is designed to maximize transmission of off-axis (e.g., diffracted) light. Second, Nose, Hayano and Fukumitsu do not disclose the recited elements as necessarily present. Nose, Hayano and Fukumitsu fail to teach or suggest, either explicitly or implicitly, that a thin film optimized for transmission of off-axis light produces an increased resolution of a

projected image on a wafer. In contrast, Nose merely discloses that transmittance changes with the incident angle and the pellicle thickness for S-polarized light (Col. 6, Lines 35-37) but is silent on how a pellicle is optimized to transmit off-axis light in order to increase resolution of a projected image. Similarly, Hayano merely discloses that a pellicle may have transmission peaks for light incident at angles greater than zero. (Figs. 1 and 2). Only by reading Applicants' Specification can a person of skill in the art determine how transmission of off-axis light through a thin film is maximized in order to increase the resolution of an image projected on a wafer. (Specification, Pages 7-8 and Pages 14-15). It is improper to use Applicants' Specification as evidence that a claim element is well known in the art. The cited references, therefore, fail to disclose the recited limitations and cannot render obvious Claims 7, 17 and 26.

Applicants also renew their arguments to the section 103 rejections in the Response dated October 19, 2005, none of which were refuted or addressed by the Examiner in the Office Action.

Given that Claims 9-14 and 16 depend from Claim 7, Claims 18-24 depend from Claim 17, and Claims 27-30 depend from Claim 26, Applicants respectfully submit that Claims 9-14, 16, 18-24 and 27-30 are allowable. As such, Applicants respectfully request that the Examiner withdraw the rejections and allow Claims 7, 9-14, 16-24 and 26-30.

CONCLUSION


Applicants appreciate the Examiner's careful review of the application. Applicants have now made an earnest effort to place this case in condition for allowance in light of the amendments and remarks set forth above. For the foregoing reasons, Applicants respectfully request reconsideration of the rejections and full allowance of Claims 7, 9-14, 16-24 and 26-30.

Applicants believe no fees are due at this time, however, the Commissioner is hereby authorized to charge any fees or credit any overpayments to Deposit Account No. 50-2148 of Baker Botts L.L.P. in order to effectuate this filing.

If there are any matters concerning this application that may be cleared up in a telephone conversation, please contact Applicants' attorney at 512.322.2581.

Respectfully submitted,

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